III. INTRODUCTION

A limited cancer data collection system was established in 1992 under South Dakota Codified Laws, SDCL 1-43-11-18) and Administrative Rules ARSD 44-22-01. The South Dakota Cancer Registry (SDCR) was established in 2001 to develop a statewide, population-based cancer surveillance system. However, the state legislature amended the law to expand reporting to reflect statewide surveillance. SDCL 1-43-14 has been in effect since 1 July 2005:

> *Any hospital licensed pursuant to chapter 34-12, physician licensed pursuant to chapter 36-4, physician assistant licensed pursuant to chapter 36-4A, nurse practitioner or nurse midwife licensed pursuant to chapter 36-9A, pathology laboratory, or free-standing radiology center that detects, diagnoses, or treats a cancer case in South Dakota shall submit a report to the Department of Health as required by § 1-43-11 to 1-43-17, inclusive*.

The SDCR has since implemented procedures and trained providers who had not previously reported cancers, to submit cases to the central registry. The SDCR will continue to help with this on a continuous basis.

Reportable cancers for 2003 include all malignant neoplasms except basal and squamous cell carcinomas of the skin and *in situ* cervical cancers. Many stakeholders such as hospital tumor registries and pathologists submitted data to the central registry. In addition, the SDCR actively followed back pathology reports and abstracted cases from facilities without tumor registries when possible.

The SDCR perfroms many quality assurance procedures to assure that the data is valid. These include:

- ✓ The data is run through numerous edits and consolidated if received from more than one reporting source.
- ✓ The SDCR links the incidence data with mortality files to identify persons whose death records show cancer as a cause of death but these cancers were not reported to the central registry.
- ✓ The SDCR links the incidence file with the Indian Health Service database to identify any American Indian South Dakotan, who was misclassified as another race.
- ✓ Runs the NAACCR Hispanic Identification Algorithm **(**NHIA**)** on incidence data to enhance identification of Latinos to more accurately reflect Latino cancer incidence.
- ✓ Collects all pathology reports to look for missing cases and follow back these cases to include them in the database.

The SDCR uses the cancer incidence data reported as well as the mortality data and health behavior surveys collected by vital statistics to provide useful infromation for cancer control and prevention programs, researchers, clinicians and policy makers. The SDCR is able to answer various epidemiological questions such as:

- ✓ How many South Dakotans are diagnosed or died from cancer each year?
- ✓ What are the most common cancers?
- ✓ When are cancers being diagnosed, i.e. at what stage?
- ✓ Which cancers are the deadliest?
- ✓ Who is affected by cancer the most?
- ✓ What are the trends in cancer incidence and mortality?
- ✓ Where are cancers occurring?
- ✓ Where and what are the disparities?
- ✓ Are screening efforts working?

As the SDCR continues to collect population based data and as more healthcare entities and providers report cases, there will be more questions that could be answered with the data. Fo example, some questions that could be answered with more data would be to look at some modifiable risk factors such as obesity and exercise

with incidence. The Harvard Report on Cancer Prevention[1] researched the risk factors for cancer. The estimated percent of total cancer deaths attributed to established causes of cancer were:

Risk Factor	Percentage
Tobacco	30 %
Adult diet/obesity	30 %
Sedentary lifestye	5 %
Occupational factors	5 %
Family history of cancer	5 %
Viruses/biological agents	5 %
Perinatal factors/growth	5 %
Reproductive factors	5 %
Alcohol	3 %
Socioeconomic status	3 %
Environmental pollution	2 %
Ionizing /UV radiation	2 %
Prescription drugs/medical procedures	1 %
Salt/food additives/contaminants	1 %

Thirty-five percent of all cancer deaths in the United States can be attributed to poor diets, obesity, and a sedentary lifestyle.

The most successful way to prevent cancer is to limit the number of modifiable risk factors by following the guidelines listed:

- ✓ Do not smoke
- ✓ Maintain a healthy weight
- ✓ Get at least 30 minutes of physical activity every day
- ✓ Eat a healthy diet
- ✓ Limit alcohol intake to less than one drink a day.
- ✓ Protect yourself from the sun
- ✓ Protect yourself and your partners from sexually transmitted diseases.

Table 1 shows some cancers and their associated modifiable risk factors according to current literature.[2] A healthy diet is low in fats and high in fruits and vegetables. Exposure to environmental or passive smoke in addition to tobacco use is an important cancer risk factor.

[1] Harvard Center for Cancer Prevention, Harvard School of Public Health, November 18, 1996
http://www.hsph.harvard.edu/organizations/canprevent/Index.html

Table 1: Known modifiable risk factors and their association with various cancers

	PREVENTION STRATEGY					
CANCER RISK REDUCTION BENEFIT	**Avoid tobacco**	**Eat a healthy diet**	**Be physically active**	**Maintian a healthy weight**	**Limit alcohol**	**Avoid excessive UV rays exposure**
Bladder	✓	✓				
Breast		✓	✓	✓	✓	
Cervix	✓					
Colorectal	✓		✓	✓	✓	
Kidney	✓			✓		
Larynx	✓	✓				
Lung	✓	✓				
Esophagus	✓	✓		✓	✓	
Oral cavity &	✓	✓			✓	✓
Pancreas	✓	✓				
Prostate		✓	✓			
Skin						✓
Stomach	✓	✓				
Corpus uterus				✓		

In addition, young teenage girls should be given the Human Papilloma Virus (HPV) vaccine, which prevents most cervical cancers.

The best way to prevent deaths from cancer is through early detection when the diaseas e can be diagnosed early thus resulting in a better prognosis. A few cancers have well established screening procedures. These are for breast, cervix, colon and prostate cancers. Skin cancers can be detected through routine and frequent examinations of changes in the skin.

As the SDCR expands data collection, the data will be increasingly used for prevention and control programs to target at risk populations as well as support epidemiologic studies such as pattern of care studies. The SDCR's objectives are to produce valid and accurate data reflecting the complete evaluation of cancer in South Dakota; to disseminate the infromation in a timely manner; and to respond to ciitzens' concerns.

Every life is touched by cancer in some way whether one is stricken with the disease or has a family or friend with the disease. Although cancer is primarily a disease of people over 50 years old, the younger a person dies from cancer, the greater the impact on societal (human) and economic costs. Cancer concerns voiced by South Dakotans are a priority for the SDCR.

The Department of Health (DOH) acknowledges the cooperation of all the health care entities that submit data to the central registry. Certified Tumor Registrars (CTR) work tirelessly and professionally to maintain high quality data in cancer registration.

[2] Source**:** *Fulfilling the Potential of Cancer Prevention and Early Detection***,** Susan J. Curry, Tim Byers, and Maria Hewitt, *Editors*, National Research Council. National Cancer Policy Board released March 10, 2003